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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/566,730	02/02/2006	Yasuyuki Tanaka	1691-0213PUS1	2171

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EXAMINER	
SCOTT, ANGELA C	

ART UNIT	PAPER NUMBER
1709	

NOTIFICATION DATE	DELIVERY MODE
06/15/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

Office Action Summary	Application No.	Applicant(s)	
	10/566,730	TANAKA ET AL.	
	Examiner	Art Unit	
	Angela C. Scott	1709	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 February 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *02/06, 05/06, & 08/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

The disclosure is objected to because of the following informalities: On page 13, line 8 of the specification, the full name of each of the listed synthetic rubbers are not recited. The full name should be written out with the abbreviation following at least the first time the term is written. For the purpose of further evaluation, the listed abbreviations have been interpreted to mean the following:

SBR – styrene butadiene rubber

NBR – acrylonitrile butadiene rubber

BR – polybutadiene rubber

IR – synthetic polyisoprene

EPR – ethylene propylene rubber

EPDM – ethylene propylene diene monomer rubber

IIR – isobutylene isoprene rubber

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Ichikawa et al. (EP 1205491).

Ichikawa et al. recites a low allergic natural rubber which is substantially free of any protein or protein decomposition products having a number average molecular weight of 4500 or more (Page 3, lines 18-20). All of the limitations of claim 1 are taught by Ichikawa et al. and therefore claim 1 is rejected under 35 U.S.C. 102(b).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. (EP 1205491) in view of Hamada et al. (JP 2001-122906). For convenience, the citations below are from the English translation of the Japanese reference attached hereto.

Regarding claim 2, Ichikawa et al. recites a low allergic natural rubber which is substantially free of any protein or protein decomposition products having a number average molecular weight of 4500 or more (Page 3, lines 18-20).

Ichikawa et al. does not teach a deproteinized natural rubber having a nitrogen content of 0.02 to 0.30% by weight of natural rubber. However, Hamada et al. teaches a deproteinized natural rubber with a reduced nitrogen content of less than or equal to 0.1% by weight of the rubber (¶13). Ichikawa et al. and Hamada et al. are combinable because they are from the same field of endeavor, namely, making deproteinized natural rubber. At the time of the invention, a person of ordinary skill in the art would have found it obvious to reduce the nitrogen content in a deproteinized rubber to this level, as taught by Hamada et al. in the deproteinized rubber of Ichikawa et al., and would have been motivated to do so because having a nitrogen content of less than or equal to 0.1% is good evidence that the rubber will not cause an allergic reaction (¶14).

Claims 3 through 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ichikawa et al. (EP 1205491) in view of Tanaka et al. (US 6,355,407).

Ichikawa et al. recites a low allergic natural rubber which is substantially free of any protein or protein decomposition products having a number average molecular weight of 4500 or more (Page 3, lines 18-20).

Regarding claim 3, Ichikawa et al. does not teach the deproteinized natural rubber having a green strength of 0.1 to 3 MPa. However, Tanaka et al. teaches a deproteinized natural rubber having a green strength of at least 1 MPa (Col. 10, lines 66-67 and Col. 11, line 1). Ichikawa et al. and Tanaka et al. are combinable because they are from the same field of endeavor, namely, making deproteinized natural rubber. At the time of the invention, a person of ordinary skill in the art would have found it obvious to make the deproteinized rubber, as taught by Ichikawa et al., have a green strength of at least 1 MPa, as taught by Tanaka et al., and would have been motivated to do so because a deproteinized rubber having an elevated green strength possesses excellent processing characteristics in kneading and sheeting (Col. 11, lines 5-7).

. Regarding claims 4 and 5, Ichikawa et al. does not teach combining a deproteinized natural rubber with another rubber, more specifically, conventional synthetic rubbers such as SBR, NBR, BR, IR, EPR, EPDM, or IIR. However, Tanaka et al. teaches that a deproteinized natural rubber can be combined with other common components, specifically, conventional synthetic rubbers, and used as a rubber composition (Col. 11, lines 44-48). At the time of the invention, a person of ordinary skill in the art would have found it obvious to combine the deproteinized natural rubber, as taught by Ichikawa et al., with conventional synthetic rubbers and use it in rubber compositions, as taught by Tanaka et al., and would have been motivated to

do so because the deproteinized natural rubber has excellent processing characteristics (Col. 3, lines 61-62).

Regarding claim 6, Ichikawa et al. does not teach using the deproteinized natural rubber in a tire. However, Tanaka et al. teaches using the deproteinized natural rubber in a tire (Col. 11, lines 41-42). At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the deproteinized natural rubber, as taught by Ichikawa et al., in a tire, as taught by Tanaka et al., and would have been motivated to do so because the deproteinized natural rubber has excellent processing characteristics (Col. 3, lines 61-62).

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 274-3303. The examiner can normally be reached on Monday through Friday, 7:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ACS
May 25, 2007

MARK EASHOO, PH.D
PRIMARY EXAMINER
11 Jun 07